



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,546	01/15/2004	Shinji Mori	740165-369	3068
25570 7590 01/17/2008 ROBERTS, MLOTKOWSKI & HOBBS P. O. BOX 10064 MCLEAN, VA 22102-8064			EXAMINER HAUGLAND, SCOTT J	
			ART UNIT 3654	PAPER NUMBER
			NOTIFICATION DATE 01/17/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Dbeltran@rmhlaw.com
LGallagher@rmhlaw.com

Office Action Summary

Application No.

10/757,546

Applicant(s)

MORI ET AL.

Examiner

Scott Haugland

Art Unit

3654

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 and 20-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/31/07 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-11, 15-18, 20, 21, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanada et al (U.S. Pat. No. 4,787,569).

Kanada et al discloses a webbing belt retractor for vehicle use comprising: a frame having a pair of leg plates 20, 105 facing one another and a back plate 12 integral with the leg plates, a rotatable spool 22 disposed between the leg plates to which the webbing belt 24 is anchored and around which the webbing belt is wound, a driving

Art Unit: 3654

mechanism (50, 52, 49) disposed between the leg plates and having an output shaft for rotating the spool in at least a take-up direction, and a clutch 33 disposed between the leg plates, mechanically interposed between the output shaft and the spool, and transmitting rotation of the output shaft to the spool. The edges of the wound belt directly face the leg plates to the extent that the belt in applicants' apparatus does. Note that the belt in the application is separated from the leg plates by flanges 24, 26 and clutch 90.

With regard to claim 18, Kanada et al discloses an electric motor (col. 5, lines 1-16).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 1-10, 12, 15-18, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson (U.S. Pat. No. 4,558,832) in view of Peter (U.S. Pat. Appl. Pub. No. 2002/0125360).

Nilsson discloses a webbing belt retractor for vehicle use comprising: a frame 31 having a pair of leg plates facing one another and a back plate integral with the leg plates, a rotatable spool 27 disposed between the leg plates to which the webbing belt

Art Unit: 3654

29 is anchored and around which the webbing belt is wound, a driving mechanism 1 disposed between the leg plates and having an output shaft 7 for rotating the spool in at least a take-up direction, and a clutch 39 disposed between the leg plates, mechanically interposed between the output shaft and the spool, and transmitting rotation of the output shaft to the spool.

Nilsson does not disclose that the driving mechanism can be used repeatedly.

Peter teaches providing a driving mechanism for tensioning a seat belt that includes an electric motor 14 which can be used repeatedly and teaches transmitting power from the motor 14 to a seat belt spool 12 using an endless belt 28 trained around gears.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Nilsson with a driving mechanism including an electric motor that can be used repeatedly as taught by Peter to eliminate the need for repair of the retractor after tensioning and/or to allow additional control over the operation of the retractor.

With regard to claim 4, Nilsson discloses a clutch 39 having a first rotating body 37 which rotates due to rotation of the output shaft, a second rotating body 28 coaxial and integral with the spool, and transmitting members 41 transmitting rotation from the first to the second rotating body.

With regard to claim 6, a balance of weight about a center between the leg plates can inherently be achieved in the apparatus of Nilsson.

With regard to claims 8 and 9, note output shaft side rotating member 23 and clutch side rotating member 37.

With regard to claim 9, the ratio of the output shaft side rotating member in relation to the clutch side rotating member is inherently changeable.

With regard to claim 12, it would have been obvious to provide Nilsson with an endless belt and gears as taught by Peter to provide a reversible non-slip drive connection between the motor and clutch.

With regard to claim 16, the location of the center of mass of the modified retractor of Nilsson would be located as claimed.

Claims 11, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nilsson (U.S. Pat. No. 4,558,832) in view of Peter (U.S. Pat. Appl. Pub. No. 2002/0125360) as applied to claim 10 above, and further in view of Tsujimura et al (U.S. Pat. No. 4,570,872).

Nilsson is described above.

Nilsson does not disclose an output shaft side rotating member and a clutch side rotating member that are meshing gears. Nilsson does not disclose a worm gear in the driving force transmitting mechanism.

Tsujimura et al teaches transmitting drive from a motor to a clutch in a seat belt mechanism using meshing gears 22, 24, 62, 68 and worm gear 74.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Nilsson with meshing gears including a worm gear in lieu

Art Unit: 3654

of pulleys between the drive motor and clutch as taught by Tsujimura et al to provide a positive, non-slip drive between the motor and clutch to ensure reliable operation.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanada et al (U.S. Pat. No. 4,787,569) in view of Peter (U.S. Pat. Appl. Pub. No. 2002/0125360).

Kanada et al is described above.

Kanada et al does not disclose an endless belt trained on peripheral surfaces of the output shaft side gear and the clutch side gear.

Peter teaches transmitting power from a motor to a seat belt spool 12 using an endless belt 28 trained on gears 24, 26.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Kanada et al with a endless belt trained on peripheral surfaces of an output shaft side gear and a clutch side gear as taught by Peter to reduce the cost of the retractor.

Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanada et al (U.S. Pat. No. 4,787,569) in view of Tsujimura et al (U.S. Pat. No. 4,570,872).

Kanada et al is described above.

Kanada et al does not disclose a worm gear in the driving force transmitting mechanism.

Tsujimura et al teaches transmitting drive from a motor to a clutch in a seat belt mechanism using meshing gears 22, 24, 62, 68 and worm gear 74.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Kanada et al with meshing gears including a worm gear between the drive motor and clutch as taught by Tsujimura et al to provide the required speed reduction with fewer parts, reducing size and cost of the retractor.

Response to Arguments

Applicants' arguments filed 10/31/07 have been fully considered but they are not persuasive.

Applicants argue that if lower and upper casings 104 and 105 in Kanada et al were read as being the leg plates recited in claim 1, then the frame in Kanada et al would have four leg plates and that 105 in Kanada et al is not integral with the frame 12 (corresponding to the claimed back plate). However, 20 and the portion of 105 in Kanada et al read on the claimed leg plates. There are a number of integral plates disclosed in the application. The noted leg plates 20 and 105 in Kanada et al are, as in the application, the outermost plates penetrated by the spool supporting shaft. 18, 20, 104, and 105 in Kanada et al are integral with 12.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sakakibara et al (U.S. Pat. No. 4,579,294), Kamijo (U.S. Pat.

Art Unit: 3654


No. 4,489,804), and Turner (U.S. Pat. No. 3,315,914) are cited to further show mounting arrangements of reels and drive motors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Haugland whose telephone number is (571) 272-6945. The examiner can normally be reached on Mon. - Fri., 10:00 am - 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Cuomo can be reached on (571) 272-6856. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


sjh
1/9/08


Peter M. Cuomo
Supervisory Patent Examiner
Technology Center 3800